

MANAGING THE HUMAN CAPITAL PERFORMANCES THROUGH THE KEY PERFORMANCE INDICATORS: A BALANCED SCORECARD APPROACH

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Abstract- Balanced Scorecard is one most commonly used tool in monitoring the company's performance. The present study has been developed based on 90 companies that do business in Romania. The purpose of this study is emphasize most important indicators used in measuring human capital performance and demonstrate whether there is a correlation between the use of the Balanced Scorecard and provenance Romanian capital firms

Keywords- Human Capital, Performance, Balanced Scorecard, Key Performance Indicators

I. INTRODUCTION

The organizations pursue their performance according with their financial goals, but lately managers have tried to find new performance indicators that would move ahead the competing companies. One of these competitive advantages is human capital.

While human capital analysis has gained ground in the last twenty-five years, it still remained disconnected from the overall business strategy. Because human capital plays a key role in value creation, using relevant KPIs to measure workforce can greatly contribute to the strategic objectives of the company.

A strategic model, such as Balanced Scorecard with key leading and lagging type indicators from different perspectives, like learning and development, internal processes, customers and financial, is a model in which key indicators on human capital can contribute to the strategic objectives of the company.

Using and measurement of Key Performance Indicators (KPIs) of human capital helps companies align goals of human capital in the organization's strategic objectives and identify, track and measure the performance of human capital to operational level.

In this paper, we followed a performance measurement approach to human capital through the Balanced Scorecard (BSC). BSC is a strategic performance management tool that provides managers a quick, but comprehensively picture on business. KPIs Measurement and reporting helps company managers to obtain real-time information on the labor performance that owns the company and overall organizational effectiveness. They must ensure a balance between financial and non-financial dimension, of BSC four perspectives: customer, financial, internal processes and learning-research; between lagging and leading indicators type, but also in terms of quality and quantity.

II. STATE OF KNOWLEDGE

Coordination of human resources to create performance for the company, society and himself was and remains a constant concern for managers and specialists. To fulfill this task have been always looking solutions to to measure performance employee activity by various methods.

Watson Wyatt's study (2003) found that "firms linking HR with business strategy activities measured by indicators have 33% higher Return on Investment than those who do not do this".

Benchmarking is a quantitative method for measuring and improving processes, products and services that comply with business. Measurements are important indicators such as:

- productivity measured by ROI as a percentage of use;
- revenues / resources by demographic separation
- raising the rate of acceptance of offer
- employees capability, as investment percentage of in trainings
- leadership by the company's revenues from value-added human resource;
- success planning by replacing the internal versus external

According to Guthrie, Ricceri & Dumay appreciates the reporting and counting may refer to the size and development of knowledge following resources: employee skills, customer relations, financial relations and information and communication technology.

The literature highlights many papers that emphasize the idea that the difference between market value and the value of company assets can be explained in terms of intellectual capital (Brennan, Connel, 2000; Han & Han, 2004; Kitts, Edvinsson & Beding, T., 2001; Drucker, 1995; Sveby, 1997).

BSC has its origin in 1990. David N. Norton, f research Nolan Norton Institute, in collaboration with Professor Robert S. Kaplan from Harvard Business School conducted a survey of 12 leading companies

including: IBM, Du Pont and General Electric, study on the methods and tools used to measure future performance. Within BSC, manager's attention is directed to non-financial indicators to measure the role of customer satisfaction, employee, duration and quality processes results.

Another important concept in the current economic context is "knowledge intensive". So knowledge management implementation requires more than implementation of IT tools, it involves changes in the organizational structure, culture and process.

Montequin et al. (2006, pp. 525 – 538), after doing an analysis of most important factors ensuring success in the implementation of knowledge management, explain by Bixler (2002) namely: vision and leadership – the existence of a knowledge management strategic plan, organizational and communication training, business performance measurement, knowledge management infrastructure, resources, governance: policies and procedures, Skyrme and Amidon (1997), sustained: clear and explicit business strategy, extensive knowledge of cognition, a compelling vision on knowledge, existence of a leadership of knowledge, the knowledge of certain systematic processes, a well-developed infrastructure in terms of knowledge, propose a new model of non monetary evaluation with a tree on three levels: blocks, clusters and indicators. So, starting from intellectual capital formula as sum between human capitalul, structural capital and relational capital, they propose for measuring qualitative, following indicators: for human capital – people competence, improving these skills, staff stability, improving the capacity of individuals and groups; for the structural capital: intrusion IT&C, technology production, philosophy and business process, organizational structure, intellectual property; and for relational capital: customer base, customer loyalty, market proximity, sales effectiveness, vendors, networking with other market players. After an analysis of the most important intellectual capital and conceptualizations of the three variables components of intellectual capital, Martin-de-Castro et al. (2011, pp. 649-662) identifies the following dimensions and variables. So, human capital has three dimensions: knowledge – formal education, specific training, development and experience of staff, skills - individual learning, collaborative teamwork, and sharing individual knowledge through communication, know-how, leadership and behaviors - patterns, and paradigms, sense of belonging, self motivation, job satisfaction, flexibility and creativity. Structural capital is developed on the following dimensions and variables: technological capital - research and development efforts as regards infrastructure, technological, intellectual and industrial property. Organizational capital comprises organizational culture, values and attitudes shared capabilities regarding telecommunications and information and organizational design.

The market value of a firm is given by its tangible and intangible assets, with the trend of diminishing share of physical capital (tangible assets) involved in getting products or services that contribute to economic performance of the company. In intangible assets category human capital is a component of consistency. There are already known and proven financial benefits for companies obtained from the investment in people, mainly in education and instruction. This investment has a high rate of recovery, namely benefits in form of increased productivity, a dezvoltării abilităților profesionale, the development of professional skills, innovation capacity and greater mobility of workers. However, many organizations still see the education and training of employees as a cost and not as investment. Orientation, in knowledge-based economy, is that employees are deemed assets of the organization, human capital is considered an intangible asset, along with the other components of intellectual capital. According to the latest trends, employees are seen as potential investors in their own human capital. The organization needs human capital for the business to succeed. Knowledge Economy proposes this vision, to look at people as critical contributors to corporate success.

III. RESEARCH METHODOLOGY

The basic method of research was the sociological survey and the main instrument is the questionnaire. The basis of this study development is the information collected through filling by analyzed company's managers of a survey about the approach on performance measurement and management of human capital, from the perspective of Balanced Scorecard. The study was conducted on a sample of 90 companies from Romania, both multinationals and SMEs who work in various fields.

The questionnaire consists of 44 questions. The administration and application being made online and collect and centralize data was performed in an automatic and secure way.

The aim of this study was to obtain statistics on how Romanian managers use KPIs in the Balanced Scorecard, the questionnaire we considered out as being the most appropriate method for making possible our research.

Qualitative research methods applied to study refers to documents that provide data about the behavior, formal structure, economic status, communication and organizational image, and research literature on existing papers in this area.

In processing and analysis of data on computer questionnaire it was used for statistical analysis SPSS program (Statistical Package for the Social Sciences). For determining the association of nominal variables it was used "Crosstab" function, and the degree of association was tested using the Chi-Square test, which measures a significant difference between the

two formats of data frequency samples, analyzing association tables of nominal categorical variables.

IV. BSC, PERFORMANCE MEASUREMENT INSTRUMENT OF HUMAN CAPITAL

Companies can use a system of indicators that identifies a number of financial and non-financial measures and their associated targets, which are reviewed to determine if the actual performance meets the targets set, which defines the main feature of BSC. Measurement and reporting of KPIs within four BSC perspectives will help company managers to obtain real-time information on the performance of human capital. Table 1 shows the most important KPIs used by Romanian managers to track the performance of human capital when surveyed.

BSC Perspective	Key Performance Indicator	Indicator type
Internal processes	personnel fluctuation;	Lagging/Non-financial
Research and Development	Level of staff training;	Leading/Non-financial
Financial	Labour productivity	Lagging/Financial
Internal processes	Satisfaction of employees;	Leading/Non-financial
Financial	Profit per employee;	Lagging/Financial
Research and Development	Costs for staff training;	Lagging/Financial
Research and Development	Costs for staff recruitment;	Lagging/Financial
Financial	The value of sales per employee;	Lagging/Financial
Internal processes	Employee retention rate;	Leading/Non-financial
Research and Development	Hours of training per employee;	Lagging/Non-financial
Customers	Returns value per employee;	Lagging/Financial

Table 1: Key performance indicators on human capital

Balanced Scorecard was created to measure performance in terms of four perspectives: financial, customer satisfaction, internal process efficiency and growth perspective.

The study underlying this work is to identify flight instruments most commonly used by companies from Romania, key indicators used in measuring human capital performance, and perception managers on using Balanced Scorecard in human capital evolves.

The results of the study conducted showed that most manager's participants are familiar with the concept of dashboard and uses such a performance management system to measure, monitor and improve performance. So 47.8% of analyzed subjects are using a dashboard, 27.8% use a simple form of the dashboard, while 24.4% of managers surveyed do not use a dashboard for enterprise performance management.

Next we analyze the degree of association between origin of invested capital and dashboard use in the company by managers to identify whether the origin of a company capital represents factors in use by managers Scoreboard.

The set of hypotheses to examine whether the use dashboard of companies in Romania is typical of companies with foreign capital includes the following assumptions:

H0: Between dashboard use and company's capital origin there is no relationship of association.

H1: Between dashboard use and company's capital origin there is a relationship of association.

The hypothesis will be tested for a materiality standard $\alpha = 0.05$. In the following table we calculated the X^2 test for testing the correlation between the uses of BSC and origin of company capital.

Since X^2 calculated is significantly higher (23.35) than critical X^2 (16.92), it is found in rejecting the null hypothesis, and therefore on the independence of the two variables. So there is a positive correlation between use and nature of capital Scoreboard.

Capital origin	Balanced Scorecard			Total
	Yes	No	A Simple form of Balanced Scorecard	
mixed private (Romanian and foreign)	12	0	1	13
	92.3%	.0%	7.7%	100.0%
Romanian private	8	14	16	38
	21.1%	36.8%	42.1%	100.0%
Foreign private	23	8	8	39
	59.0%	20.5%	20.5%	100.0%
Total	43	22	25	90
	47.8%	24.4%	27.8%	100.0%

Table 2: Scoreboard usage analysis based on shareholders of the company

Majority of the companies in the sample analyzed using the dashboard as a tool for business or operation of a simple form of it are companies with foreign capital or mixed private (foreign and Romanian), which leads to the conclusion that in Romania, the dashboard is a tool for piloting imported along with the expansion of multinational companies, with a higher frequency of use in companies with foreign capital that investors feel the influence of organizational culture. So, according to the association matrix is seen as the highest frequency of use of the dashboard appears in foreign capital companies, while Romanian private capital companies uses at most a simple form Scoreboard.

The analysis found that 59% of companies with foreign capital use dashboard as a tool for steering, while within the Romanian capital, only 21.1% use such a tool, and if private companies are mixed, is observed also managers targeting new techniques for measuring and managing performance of the company.

In major proportion (73.1%), respondents who use dashboard in the management company's performance, often use and non-financial indicators of performance appraisal, while those who do not use such a tool or use a simpler form of painting board, use

a low frequency or no non-financial indicators. This demonstrates that the implementation of the dashboard is part of organizational culture and a complex system of monitoring, reporting and the improvements to the company's objectives and that the managers concerned and the non-financial company demonstrates a high level of its development.

About 30% of respondent managers have a combined experience of over 15 years in leadership positions, of which 69.2% use dashboard in enterprise performance management. So there is a positive correlation between the use dashboard and professional experience of managers, which reinforces the idea according to which the successful implementation of the dashboard in the management company's performance, managers have sufficient knowledge to understanding and managing tool pilotage. The performance of individual managers and training is an important factor in implementing the Scoreboard as a tool for operation of companies.

Regarding the type of instrument flight deck, Balanced Scorecard remains the main tool used by managers in monitoring performance. These results have led us to maintain research and interpret the particular use of the Balanced Scorecard in companies from Romania.

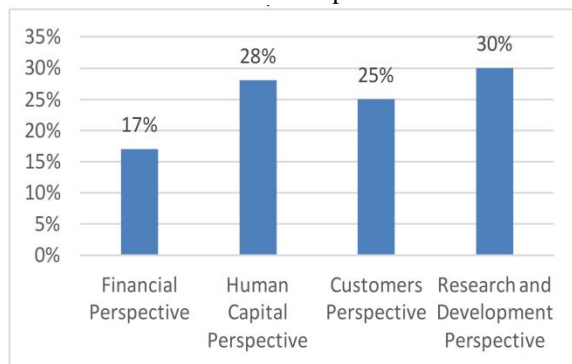


Figure 1 The importance of controlling the four perspectives of the Balanced Scorecard

V. HUMAN PERFORMANCE MEASUREMENT KPIS

Key Performance Indicators (KPIs) are today some of the most popular management tools being used to understand, learn and improve the performance level of industries, departments and teams. The interest in using KPIs is increasing worldwide, driven both by government regulations and the benefits they bring in terms of accountability, transparency and achieving results.

For any dashboard is very important key performance indicators (KPIs) system, which monitors the degree of achievement of the strategic objectives of the organization, ensuring success in business. Development and use of KPIs basis for analyzing an organization's performance and its the continuous improvement of it.

To shape a way of assessing the importance of using the dashboard in evaluating and managing company performance, managers have been asked to state their

opinion on this issue. From centralizing the results we concluded that in view of managers:

- It is important that a company's performance to be tracked in time and space through specific indicators.
- Companies that use a system of indicators to manage performance have better results than those that do not implement such a system.
- Dashboard is the most relevant tool in measuring and managing enterprise performance.
- Dashboard is the main tool used by managers to achieve business objectives and in the decisional process;
- Company performance is tied to individual performance of all persons involved in business.

These results demonstrate that in the current economic situation namely companies orientation towards reporting of as many informations as possible about nonfinancial aspects of companies. In a competitive economy, research and development ensures a definite improvement activity and performance benefit offered by the company by winning innovation.

In view of Romanian managers on strategy for improving the human capital perspective:

- the company encourages employees to develop their skills and long-term career plans.
- Enterprises have adequate safety systems to be sufficient protection for employees.
- company provides a good work-life balance for employees. (eg. flexible working)

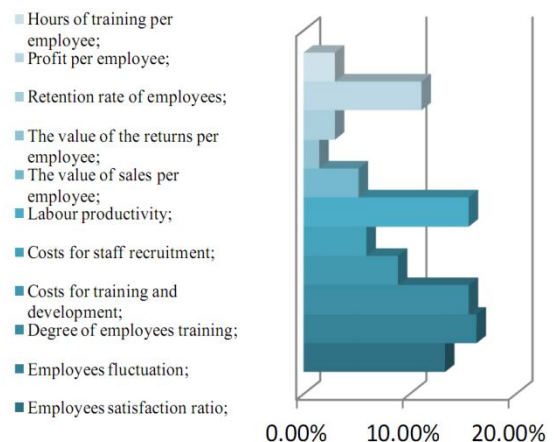


Figure 1: Key Performance Indicators for human capital performance in Romania

Most frequent key performance indicators used by the respondent company's managers who use dashboard:

- Satisfaction of employees (13.33%);
- Fluctuation (16.30);
- The readiness of the staff (15.56%);
- Costs for training and staff development (8.89%);
- Costs related to staff recruitment (5.93%);
- Labour productivity (15.56%);
- The value of sales per employee (5.19%);
- The employee returns value (1.48%);
- Employee retention rate (2.96%);
- Profit per employee (11.11%);

- Hours of training per employee (2.96%);
- Other (0.74%)

A. Fluctuation

Measures the rate at which employees leave the organization in a certain period of time. It is an indicator of type rate whose values should be on decreasing trend. It reflects the level of employee satisfaction in relation to the organization being in a direct relationship with job satisfaction, the correlation between the expected rewards to employees and their satisfaction at work can reduce the problems caused by fluctuation. In the BSC, is presented in the research learning perspective, an indicator facing satisfaction, impact on results, leading type and quantitative. Study results showed that managers implement this strategic indicator, quarterly. The limits are that this indicator does not identify departments that are affected utmost fluctuation, seniority and performance of the departed.

Formula: $I_f = \left(\frac{N_p}{N_m} \right) * 100$ (Np- the number of employees who left during the year; Nm- the average number of employees during the year).

B. The level of staff training

Expresses the extent to which employees' professional qualifications for the position they occupy. It is an indicator of the type whose rate trend should be upward. In the BSC belongs learning perspective research with impact on results, lagging type, reflecting the proportion of skilled workers in total employment. This indicator allows managers to decide to what extent the company should invest in training and staff development.

C. Labour productivity

Labour productivity is one of the most important synthetic indicators of economic efficiency of enterprises, reflecting labor efficiency in manufacturing. In the BSC, labor productivity belong to the financial perspective, being a quantitative indicator lagging type, whose trend should be upward. Labor productivity determine whether the ratio of production volume and the amount of labor in getting his or by reporting the work time spent on production volumes achieved: $W = \frac{Q}{T}$ or $t = \frac{T}{Q}$.

D. Satisfaction of employees

As many studies have shown, the organization's performance is strictly linked to employee satisfaction. Satisfaction at work depends on the assessment and employee expectations. Lack of job satisfaction can cause absenteeism, employee turnover, affect motivation and employee performance.

Therefore, this indicator can be improved by targeting investments organizations in training, development, compensation and intangible materials, and develop organizational culture, strategies and objectives set. Employee satisfaction is important because it affects

the attitude and behavior of individual beliefs. They can contribute so that employee can work productively, or on the contrary, work inefficiently. From the perspective of BSC, this indicator is shown in the learning-research area, is a qualitative, whose analysis is based on motivational programs that can deliver performance improvement of human capital. This indicator can be improved by targeting investments organizations in training, development, compensation and intangible materials, and develop organizational culture, strategies and objectives set. So, to know what is the situation in the company and control the pulse constant activity of the organization in order to bring improvements in accordance with market needs and economic returns on employee satisfaction is essential that the study is an essential element for the success of any company.

E. Profit per employee

Net profit per employee is not a relevant economic indicator for companies, because is a comprehensive indicator to analyze the efficiency of human resources and by default the labor productivity. It is more complex because it takes into account besides the labor productivity, a number of influential of commercial and pricing policy promoted by the company. The indicator is determined by the formula: $E = P / N_s$ (P -profit obtained by the company, Ns- number of employees). Profit per employee is a result of labor productivity and business profitability and is analyzed in the BSC financial perspective, as a lagging indicator type, providing quantitative information about the profitability of an employee.

F. Costs for training and development

This indicator reflects the level of investments made by the company for preparing and improving the human capital, in order to improve their skills and abilities for obtaining better financial performance. The costs for employees preparing and training, although it is a financial indicator is analyzed in the BSC learning-growth perspective, as a leading indicator type which can sum up the company's costs for training, development, compensation material and immaterial.

G. Costs for staff recruitment

Recruitment and selection of staff is one of the most important tasks of any organization, because it is a direct way that can improve the achievement of the goals, objectives and tasks of the organization. Costs for staff recruitment department includes therecruitment costs, the vacancies costs and the costs of possible errors in recruitment. Costs for staff recruitment is a financial indicator, used in the learning-growth perspective, reflecting the company's efforts to ensure the quality of the company's employees. In this present it should be evaluated both, the costs and the benefits of human capital recruitment process.

H. The value of sales per employee

This indicator measures the value of sales made by the company, due to each employee of the company. It is a financial indicator, lagging, expressing the effectiveness and efficiency of the commercial employees. The indicator is specific to any industry, being used in the financial framework of the BSC. The trend needs to be increasing.

The limit of this ratio is that this takes into account the total number of employees, whether they are part of the commercial departments, which distorts the reality of this indicator, where a company with a small number of employees in the commercial department.

I. Employee retention rate

This indicator reflects the desire of an employee to continue to work and contribute to the company's development, but also to a possible termination of the labor contract. These performance indicators focus generally on employee satisfaction, commitment and their fluctuation in the organization. So "Employee retention is the successful combination of work satisfaction (wages, working environment, assignments, promotion opportunities) and the alternatives that an employee has in the relation with its job" (John E. Sheridan).

In the BSC, this indicator can be seen in the perspective of internal processes. It is a financial indicator that expresses the total number of employees leaving the company during a period of time compared to the total number of employees and indicator of the success of recruitment policy.

J. Hours of training per employee

It reflects the company's intention to invest in training and employees development in order to increase their performance to achieve the organizational objectives. It is a non-financial indicator, shown in the learning-growth perspective, whose development has to be increasing, focused on the results, being a leading indicator type. As a way of determination is calculated by dividing the number of hours of training at the company's number of employees.

K. The value of the returns per employee

This indicator measures the value of returned products per employee. It is an indicator of efficiency, whose tendency has to be decreasing. The analysis can be performed in the BSC as an indicator of financial perspective. We consider that this indicator needs to be analyzed in correspondence with indicators for productivity and profitability in order to determine if his values is significant.

CONCLUSIONS

Many studies of specialists in human resources, and the current research led us to conclude that the Balanced Scorecard is a tool often used in the measuring of companies' performance behind the four perspectives: financial, customers, internal process and learning-growth. As a result of research that was the basis of this paper, we conclude that most managers from Romania are familiar with the concept of Balanced Scorecard performance and track the evolution of human capital with the help of this tool. The fact that a higher proportion of companies with foreign capital use the Balanced Scorecard as a tool for piloting reflect the positive influence of globalization on Romanian companies. This comes to confirm the studies of other authors according to which the diversity of nationalities in a company is directly correlated with the company's and human capital performance. Romanian companies should review their performance measurement strategies in order to use Balanced Scorecard systems for measuring both, global company results and performance of human resources in the enterprise.

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